

CLAIMS

What is claimed is:

- 5 1. A process for applying and curing a powder coating which comprises the steps of (1) applying the powder coating to a substrate and (2) irradiation the applied powder coating with near infrared (NIR) radiation using NIR emitters, wherein the NIR radiation is restricted by filtration of the wavelength to a wavelength range of 250 to 3000
10 nm, with a primary focus of the radiation in a wavelength range from 750 to 1200 nm.
2. Process according to claim 1 wherein the radiation spectrum of the NIR radiation is restricted by filtration to a wavelength range of 750 to
15 1800 nm.
3. Process according to claim 1 wherein a combination is used of the NIR irradiation with a conventional heat source.
- 20 4. Process according to claim 3 wherein the conventional heat source is selected from the group consisting of infrared radiation, convection heat and gas infrared radiation emitters.
5. Process according to claim 1 wherein the NIR radiation is filtered by
25 filters selected from the group consisting of borosilicate glass, silica glass and vitreous ceramic.
6. Process according to claim 5 wherein the filters are coated on one or both sides with absorbent or reflective substances.
- 30 7. Process according to claim 1 wherein the powder coating is cured in a period from 0.5 to 60 seconds.

8. Process according to claim 1 wherein three-dimensional substrates are coated and cured.
9. Substrates coated and cured by the process according to claim 1.